LED HeadLight

PORTABLE SURGICAL QUALITY LED ILLUMINATION

VOROTEK

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Features, Specifications, Set-up & Troubleshooting

LED Illumination

- Light emitting diodes (LED) are a solid state device with an average life of >35,000 hours.
- They rarely need replacing, but if this is necessary it must be done by VOROTEK.
- The illumination colour is daylight and does not vary with the age of the LED or the level of charge of the battery pack.
- Illumination uniformity and quality is much better than with filament lamps.
- Brightness now compares with operating room headlights.

Dimmable Illumination (Optional)

- The dimmer function provides 7 evenly spaced levels of illumination. The dimmer switch is located on the leash:
  – **Click** once **on**, **click** once **off**
  – **Press and hold** for dimming to select level of illumination
- Once preferred level of illumination is selected a **click** will turn the illumination on/off without changing set level.

Battery Pack and Charger / Direct Mains Power Supply

Specifications and features

- Batteries are Lithium Ion: 11.1 Volts, 2,900mAh. This provides 10 hours of “on time” at maximum level of illumination.
- Memory effect for these batteries is negligible.
- The Battery Pack features short circuit protection and charging control circuitry.
- **Use only the supplied Charger**, otherwise warranty will be void.
- For operations lasting several hours, the Direct Mains Power Supply is often a better option (see Direct Mains Power Supply).
- For numerous short procedures the Battery Pack is very convenient.
- It is designed for use on left side of belt or in shirt pocket of scrubs.
- If it is worn in the breast pocket the switch can be used by the operator through the operating gown.
- An alternative is to clip the Battery Pack to the back of the gown.

Switch on Battery Pack

- Switch on Battery Pack has three positions which are labelled **ON**, **OFF** and **CHARGE**.

Indication that Battery Pack must be charged

- LED illumination cuts out and resets repeatedly.
  NOTE: LED illumination does not fade, but the protective circuit breaker keeps switching off (and resetting).

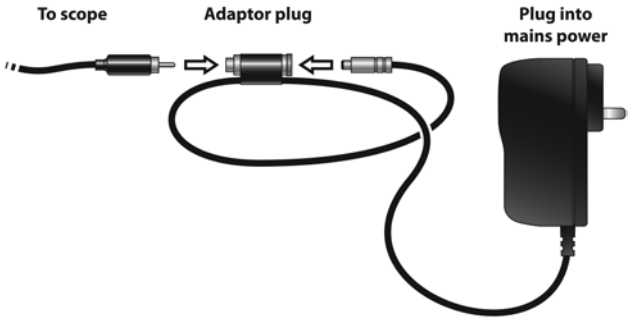
NOTE: Charging is best done overnight, frequently and before the Battery Pack runs flat.

Battery Pack charging (Battery Pack indicator)

- Set switch on the Battery Pack to charge position.
- **RED CONSTANT** – Charging (takes up to 8 hours).
- **GREEN** – 90% plus charged but still trickle charging.
  When charging reaches 100% trickling stops and indicator reverts to red flashing.
- **RED FLASHING** – Fully charged.
  It will also flash red if incorrectly connected i.e. Battery Pack switch not in the charge position or charger not connected to mains.

Direct Mains Power Supply

- To connect the L Scope to the Direct Mains Power Supply, the adaptor plug must be used. The adaptor plug is fixed to the Charger / Direct Mains Power Supply lead - see diagram below.
  NOTE: Battery Pack cannot be connected.



– *SpecFrame Model*

Height adjustment

- The height of the illumination system is adjusted by moving the system up or down on the SpecFrame bracket.
- Loosen the screw that connects the illumination system to the SpecFrame 1 turn and adjust.
- Do not leave screw loose, always re-tighten.

Toggle on wiring leash

This is often worth using:
– To prevent sliding down the nose
– For all lengthy procedures, e.g. operating
– To take pressure off the nose
– When head is tilted down

– *HeadBand Model*

- The HeadBand version requires more care to keep the Illumination in optimal position.
- The big advantage of the HeadBand version is that it is suited to shared use. It can be worn over the top of the user's spectacles.
- The HeadBand will fit almost any head anatomy.

HeadBand adjustment

- The HeadBand mounting bracket has 3 adjustable links.
- The 3 link system allows separate adjustment of viewing the angle and forward position of the illumination system.
- The height of the illumination system can be adjusted by moving the HeadBand up or down on the forehead.

Working with Corrective Lenses

- Can be fitted to the SpecFrame of the LED HeadLight by an Optometrist.
- The HeadBand model can also be used over the individuals own corrective spectacles.

Lens fitment

- There is no need to unscrew the illumination system or dismantle the scope in any way, other than the frame screws for the lenses.

Troubleshooting

Illumination cuts off

- See section on '*Indication That Battery Pack must be charged'*

Battery Pack will not charge

- See section on '*Battery Pack and Charger*'.

SpecFrame damage

- Most problems can be dealt with by an optometrist e.g. missing screws, new nose pads and bent frames.
- For SpecFrame replacement contact VOROTEK.

For all other problems contact VOROTEK.

Warranty

- *Scopes* - 3 year for any component defect or manufacturing failure.
- *Battery Pack* - 18 months for any component defect or manufacturing failure.
- Warranty does not cover abuse, misuse or transit damage.
- Please contact **VOROTEK** to discuss problems or faults before sending for repairs.